

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-13. (Canceled).

14. (New) A modulation method of applying quadrature modulation to a first input symbol and a second input symbol, comprising a quadrature modulation step of applying quadrature modulation to a Nyquist signal of said first input symbol and a Nyquist signal of said second input symbol obtained by giving a delay difference corresponding to an integer multiple of  $1/4$  of the symbol period of said first input symbol to the Nyquist signal of said first input symbol using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal as a carrier.

15. (New) The modulation method according to claim 14, wherein the quadrature modulation step comprises:

a step of giving a delay difference corresponding to  $1/4$  of the symbol period to each of four lines of input symbols and Nyquist-shaping the symbols to obtain first to fourth Nyquist signals having a delay difference corresponding to  $1/4$  of the symbol period;

a primary modulation step of carrying out quadrature modulation on first and second Nyquist signals having a delay difference corresponding to  $2/4$  of the symbol period and on third and fourth Nyquist signals having a delay difference corresponding to  $2/4$  of the symbol period using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal as a carrier; and

a secondary modulation step of carrying out quadrature modulation on the signal resulting from quadrature modulation of said first and second Nyquist signals and the signal resulting from quadrature modulation of said third and fourth Nyquist signals obtained in said primary modulation step using a carrier of a predetermined frequency.

16. (New) The modulation method according to claim 14, wherein the quadrature modulation step comprises:

a step of giving a delay difference corresponding to  $1/4$  of the symbol period to each of four lines of input symbols and Nyquist-shaping the symbols to thereby obtain first to fourth Nyquist signals having a delay difference corresponding to  $1/4$  of the symbol period;

a primary modulation step of carrying out quadrature modulation on the first and second Nyquist signals having a delay difference corresponding to  $1/4$  of the symbol period and the third and fourth

Nyquist signals having a delay difference corresponding to 1/4 of the symbol period using a carrier having a predetermined frequency; and a secondary modulation step of carrying out quadrature modulation on the signal resulting from quadrature modulation of said first and second Nyquist signals and the signal resulting from quadrature modulation of said third and fourth Nyquist signals obtained in said primary modulation step using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal as a carrier.

17. (New) A modulation apparatus comprising a quadrature modulator that inputs a first Nyquist signal of a first input symbol and a second Nyquist signal of a second input symbol having a delay difference corresponding to an integer multiple of 1/4 of the first input symbol period with respect to the Nyquist signal of said first input symbol and carries out quadrature modulation on the first and second Nyquist signals using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each Nyquist signal.

18. (New) The modulation apparatus according to claim 17, comprising:  
a group of delayers that give a delay difference corresponding to 1/4 of the symbol period to each of four lines of input symbols;

Nyquist filters that form Nyquist signals from said four lines of symbols;

first and second quadrature modulators that input Nyquist signals having a delay difference corresponding to  $2/4$  of the symbol period respectively and apply quadrature modulation to the input Nyquist signals using a cosine wave of a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal as a carrier; and

third quadrature modulator that carries out quadrature modulation using the modulated signal obtained from said first quadrature modulator and the modulated signal obtained from said second quadrature modulator with a carrier having a predetermined frequency.

19. (New) The modulation apparatus according to claim 17, comprising:

a group of delayers that give a delay difference corresponding to  $1/4$  of the symbol period to each of four lines of input symbols;

Nyquist filters that form Nyquist signals from said four lines of symbols;

first and second quadrature modulators that input Nyquist signals having a delay difference corresponding to an odd-number multiple of  $1/4$  of the symbol period respectively and apply quadrature modulation using a carrier of a predetermined frequency; and

a third quadrature modulator that carries out quadrature modulation using the modulated signal obtained from said first quadrature modulator and the modulated signal obtained from said second quadrature modulator with a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal as a carrier.

20. (New) A demodulation apparatus comprising a quadrature demodulator that carries out quadrature demodulation on a modulated signal obtained by carrying out quadrature modulation on first and second Nyquist signals using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal.

21. (New) The demodulation apparatus according to claim 20, comprising:

a first quadrature demodulator that receives a modulated signal and carries out quadrature demodulation on the modulated signal using a predetermined carrier frequency to obtain first and second demodulated signals;

a second quadrature demodulator that carries out quadrature demodulation on said first demodulated signal using a cosine wave having a frequency corresponding to an odd-number multiple of the

basic frequency of each said Nyquist signal to obtain third and fourth demodulated signals; and

a third quadrature demodulator that carries out quadrature demodulation on said second demodulated signal using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal to obtain fifth and sixth demodulated signals.

22. (New) The demodulation apparatus according to claim 20, comprising:

a first quadrature demodulator that inputs a modulated signal and carries out quadrature demodulation on the modulated signal using a cosine wave having a frequency corresponding to an odd-number multiple of the basic frequency of each said Nyquist signal to obtain first and second demodulated signals;

a second quadrature demodulator that carries out quadrature demodulation on said first demodulated signal using a predetermined carrier frequency to obtain third and fourth demodulated signals; and

a third quadrature demodulator that carries out quadrature demodulation on said second demodulated signal using a predetermined carrier frequency to obtain fifth and sixth demodulated signals.